

IN THE CLAIMS:

Please amend the claims, as follows:

1. (currently amended) A method for trimming a fuel injector located on an engine, comprising the steps of:

modifying an engine speed control;

interrupting at least one injection event;

monitoring a change ~~associated with~~ of an engine speed; and

~~responsively~~ trimming the injector in response to the change.

2. (original) A method, as set forth in claim 1, wherein modifying an engine speed control includes the step of loosening an engine speed control to allow changes in engine speed within a desired range.

3. (original) A method, as set forth in claim 2, wherein the engine speed control is a proportional-integral control and modifying an engine speed control includes the steps of:

modifying a gain of the proportional control; and

selectively disabling the integral control.

4. (original) A method, as set forth in claim 1, wherein interrupting at least one injection event includes the step of interrupting at least one of a pilot and a main injection event.

5. (original) A method, as set forth in claim 4, wherein interrupting at least one injection event includes the step of cutting out at least one injection event.

6. (original) A method, as set forth in claim 5, wherein interrupting at least one injection event includes the steps of:

cutting out a main injection event; and

subsequently cutting out a pilot injection event while the main injection event is cut out.

7. (original) A method, as set forth in claim 5, wherein interrupting at least one injection event includes the step of cutting out one of a main and a pilot injection event.

8. (canceled)

9. (original) A method, as set forth in claim 1, wherein monitoring a change in engine speed includes the step of monitoring a time for a change from a first engine speed to a second engine speed.

10. (original) A method, as set forth in claim 1, wherein monitoring a change associated with an engine speed includes the steps of:

- determining a reference speed subsequent to modifying the engine speed control;
- interrupting a first injection event;
- determining a first change in engine speed from the reference speed in response to interrupting the first injection event;
- interrupting a second injection event; and
- determining a second change in engine speed from the first change in engine speed in response to interrupting the second injection event.

11. (original) A method, as set forth in claim 1, wherein interrupting at least one injection event includes the steps of:

- determining a reference speed subsequent to modifying the engine speed control;
- interrupting a main injection event;
- determining a first change in engine speed from the reference speed in response to interrupting the main injection event;
- interrupting a pilot injection event during interruption of the main injection event; and

determining a second change in engine speed from the first change in engine speed in response to interrupting the pilot injection event.

12. (original) A method, as set forth in claim 1, wherein the engine includes a plurality of fuel injectors located thereon, further including the steps of:
interrupting at least one injection event for a first injector;
monitoring a change associated with the engine speed;
restoring the at least one injection event to the first injector; and
repeating the interrupting and speed monitoring steps for each of the plurality of injectors.

13. (original) A method, as set forth in claim 12, further including the steps of:
determining an average engine speed change based on the interrupting and speed monitoring steps; and
trimming each of the plurality of fuel injectors as a function of the average speed change.

14. (original) A method for trimming a fuel injector located on an engine, comprising the steps of:
modifying an engine speed control;
interrupting a main injection event;
determining a first speed change;
interrupting a pilot injection event while maintaining the main injection event interruption;
determining a second speed change; and
trimming the fuel injector as a function of the first and second speed changes.

15. (original) A method, as set forth in claim 14, wherein trimming the fuel injector includes the step of modifying the duration of at least one fuel injection event.

16. (currently amended) A method of trimming a plurality of fuel injectors located on an engine, comprising the steps of:

- a) modifying an engine speed control;
- b) interrupting at least one injection event for a first injector;
- c) monitoring ~~[[an]]~~ a first engine speed change, which is associated with interrupting the at least one injection event for the first injector;
- d) repeating steps b) and c) for each additional fuel injector;
- e) determining an average engine speed change; and
- f) ~~responsively~~ trimming each fuel injector in response to each fuel injector's associated engine speed change.

17. (original) A method, as set forth in claim 16, further including the step of restoring the engine speed control.

18. (currently amended) An apparatus for trimming a fuel injector located on an engine, comprising:

- an engine speed control device;
- an engine speed sensor; and
- a controller for modifying an engine speed control of the engine speed control device, interrupting at least one injection event, monitoring a change in engine speed, and ~~responsively~~ trimming the injector in response to the change.

19. (currently amended) An apparatus for trimming a fuel injector located on an engine, comprising:

- means for modifying an engine speed control;
- means for interrupting at least one injection event;
- means for monitoring a change ~~associated with~~ of an engine speed; and
- means for ~~responsively~~ trimming the injector in response to the change.

20. (original) A method for balancing multiple injection events of a fuel injector located on an engine, comprising the steps of:

- interrupting a first injection event;
- monitoring a change associated with an engine speed;
- interrupting a second injection event;
- monitoring a further change associated with the engine speed; and
- trimming the first and second injection events as a function of the engine speed changes.

21. (original) A method, as set forth in claim 20, further including the step of modifying an engine speed control during the interrupting and speed monitoring steps.